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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,917	11/01/2001	Joseph A. Zupanick	067083.0161	7751

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DALLAS, TX 75201-2980

EXAMINER

KRECK, JOHN J

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 01/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,917

Applicant(s)

ZUPANICK ET AL.

Examiner

John Kreck

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 79-96 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 79-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18. 6) ☐ Other: _____

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/7/02 has been entered.

Claims 79-96 are pending in this application.

The terminal disclaimer filed on 11/7/02 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent number 6,280,000 has been reviewed and is accepted. The terminal disclaimer has been recorded, and is sufficient to overcome the double patenting rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3673

1. Claims 79-83, 86-91, and 94-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puri, et al. in view of Murray, et al. (U.S. Patent number 5,785,133).

The Puri reference teaches the forming a drainage pattern and the step of simultaneously producing water and coal seam gas from a area of a coal seam. The Puri reference fails to explicitly disclose the forming a drainage pattern comprising auxiliary bores extending from and arranged on opposite sides of a main bore.

The Murray reference teaches a drainage pattern which includes a central bore and auxiliary bores arranged in substantially equal parallel spacing on opposite sides of the axis of the pattern. It is apparent that the Murray pattern provides for uniform coverage of a subterranean area from a single surface well.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a pattern as taught by Murray, including auxiliary bores arranged in substantially equal parallel spacing on opposite sides of the axis of the pattern with the step of simultaneously removing water and gas from the coal seam taught by Puri as called for in claim 79, in order to achieve uniform coverage of a subterranean area from a single surface well. The claimed property of the removal taking place "substantially uniformly" would be an inherent result of the uniform coverage achieved by the pattern taught by Murray.

With regards to claims 80 and 81; it would have been further obvious to one of ordinary skill in the art at the time of the invention to have horizontal bores as called for in claim 80; and to have included the auxiliary bores generally symmetrically arranged

Art Unit: 3673

as called for in claim 81, in order to achieve uniform coverage of a subterranean area from a single surface well.

With regards to claim 82; the Murray pattern is rectangular, but is clearly applicable to any desired shape. Applicant has not disclosed that the equal length or width provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a rectangular shape because the shape of the drained area does not affect the production. Therefore, it would have been further obvious to one of ordinary skill in the art at the time of the invention to have produced water and gas from an area having equal length and width.

With regards to claim 83, Murray teaches the substantially horizontal pattern, thus it would have been further obvious to one of ordinary skill in the art at the time of the invention to have modified the Puri method to have a horizontal pattern, in order to achieve uniform coverage of a subterranean area from a single surface well.

With regards to claim 86, it is well known in the drilling industry that the path taken by a well bore is a matter of design, based on factors such as surface conditions, property rights, and underground conditions. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Puri method to have included the length of the auxiliary bores progressively shorten as they progress from a surface well bore as called for in claim 86; one of ordinary skill in the art would be motivated to make such a modification based on property rights (one of ordinary skill in the art would know not to drill a lateral to the property line) or

underground conditions (one of ordinary skill in the art would know not to drill past a production zone, for example).

Regarding independent claim 87:

The Puri reference teaches the forming a drainage pattern and the step of simultaneously moving water and coal seam gas. The Puri reference fails to explicitly disclose the pattern having auxiliary bores extending from and arranged on opposite sides of a main bore.

The Murray reference teaches a drainage pattern which includes a central bore and auxiliary bores arranged in substantially equal parallel spacing on opposite sides of the axis of the pattern. It is apparent that the Murray pattern provides for uniform coverage of a subterranean area from a single surface well.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a pattern as taught by Murray with the step of moving taught by Puri, including auxiliary bores arranged in substantially equal parallel spacing on opposite sides of the axis of the pattern as called for in claim 87, in order to achieve uniform coverage of a subterranean area from a single surface well. The claimed property of the moving taking place "substantially uniformly" would be an inherent result of the uniform coverage achieved by the pattern taught by Murray.

With regards to claims 88 and 89; it would have been further obvious to one of ordinary skill in the art at the time of the invention to have include horizontal bores as called for in claim 88; and to have included the auxiliary bores generally symmetrically

arranged as called for in claim 89, in order to achieve uniform coverage of a subterranean area from a single surface well.

With regards to claim 90; the Murray pattern is rectangular, but is clearly applicable to any desired shape. Applicant has not disclosed that the equal length or width provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a rectangular shape because the shape of the drained area does not affect the production. Therefore, it would have been further obvious to one of ordinary skill in the art at the time of the invention to have produced water and gas from an area having equal length and width.

With regards to claim 91, Murray teaches the substantially horizontal pattern, thus it would have been further obvious to one of ordinary skill in the art at the time of the invention to have modified the Puri method to have a horizontal pattern, in order to achieve uniform coverage of a subterranean area from a single surface well.

With regards to claim 94, it is well known in the drilling industry that the path taken by a well bore is a matter of design, based on factors such as surface conditions, property rights, and underground conditions. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Puri method to have included the length of the auxiliary bores progressively shorten as they progress from a surface well bore as called for in claim 94; one of ordinary skill in the art would be motivated to make such a modification based on property rights (one of ordinary skill in the art would know not to drill a lateral to the property line) or

underground conditions (one of ordinary skill in the art would know not to drill past a production zone, for example).

With regards to claim 95, the Murray reference teaches a quadrilateral area, thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Puri method to have a quadrilateral area, in order to produce gas from a quadrilateral zone.

With regards to claim 96, the Murray method inherently provides uniform coverage, thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Puri method to have uniform coverage, in order to produce gas from the entire zone.

2. Claims 84, 85, 92 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puri, et al. and Murray, et al. as applied to claims 79 or 87 above, and further in view of Dickinson, III, et al. (U.S. Patent number 4,527,639).

The Puri and Murray references fail to teach a cavity. The Dickinson reference teaches a similar method, which includes forming an enlarged diameter cavity in order to facilitate drilling of laterals off of a main bore.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Puri method to have included forming an enlarged diameter cavity as called for in claims 84 or 92, in order to facilitate drilling of laterals off of a main bore.

With regards to claims 85 and 93; it is apparent that the cavity dimensions are largely a matter of engineering design. It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Puri method to have included a cavity having a diameter of approximately 8 feet as called for in claims 85 or 93, based on formation characteristics or drilling conditions.

Response to Arguments

3. Applicant's arguments filed 11/7/02 have been fully considered but they are not persuasive.

With regards to applicant's arguments that the Murray and Puri references disclose the uniform removal of water and gas; Murray shows a pattern which provides uniform coverage of the formation; and Puri teaches the simultaneous removal of water and gas. The application of the teaching of a uniform pattern to the Puri removal step would necessarily result in uniform removal of water and gas.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation can be found in the *Murray* reference col. 1, line 14:

"Those skilled in hydrocarbon recovery operations have long recognized the benefits of drilling multiple laterals off a single borehole extending to the surface. In many applications, the portion of the borehole from which the laterals extend is vertical or inclined, so that each of the laterals may extend into a different level production zone. ***Several relatively thin production zones may thus be laterally drilled and hydrocarbon recovered from each production zone with only one borehole extending to the surface.*** In recent years, boreholes extending to the surface have been drilled with lower portions extending substantially horizontally through an oil bearing formation. Multiple horizontally extending laterals off this horizontal portion of the borehole allow for more efficient recovery of hydrocarbons from the zone. "[emphasis added]

The advantage of combining the teachings of the *Murray* and *Puri* reference is that only a single surface borehole is needed. Since drilling is expensive, one of ordinary skill in the art would find it desirable to reduce the number or length of boreholes.

Applicant's argument that "the fact that a combination is advantageous does *not* mean that there is a suggestion to combine" is wholly unpersuasive. The advantages clearly taught by *Murray* provide ample suggestion to one of ordinary skill in the art.

Applicant has argued that "*Murray* already discloses that only a single surface bore may be used, so no teaching from *Puri* is needed to show this". It is questioned whether "*Murray*" and "*Puri*" should have been switched in that statement, since *Murray* is cited in the rejection for the teaching of a single surface bore. This line of argument is also not persuasive because although *Puri* teaches that one well may be used, *Puri* uses multiple wells to access a large area. *Murray* teaches the advantages of using a pattern with lateral bores to access a larger area from a single surface bore.

Applicant's arguments that Puri teaches away from the proposed combination are not persuasive: although Puri does teach an embodiment with at least two wells, Puri also teaches an embodiment with one well (col. 8, lines 8-18).

4. Applicant's further arguments concerning the Dickinson reference are not persuasive: in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is taught by Dickinson, which shows that the cavity eases the task of drilling laterals..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is (703)308-2725. The examiner can normally be reached on 6:30-3:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703)308-2978. The fax phone numbers for the organization where this application or proceeding is assigned are

Application/Control Number: 10/003,917
Art Unit: 3673

Page 11

(703)305-3597 for regular communications and (703)305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-4177.



John Kreck
Examiner
Art Unit 3673

JJK
January 9, 2003